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HOW TO BECOME AN


Ornamental Painter.



PRICE, \$1.50.



PUBLISHED BY
FREDERICK A. TIFFANY,
EMPORIA, KANSAS.





HOW TO BECOME AN

ORNAMENTAL PAINTER

—BY—

FREDERICK A. TIFFANY,

EMPORIA, KANSAS.

A SAFE, SURE AND PRACTICAL GUIDE

TO

ORNAMENTAL PAINTING

Embracing all the Latest and Most Improved Methods.

A Perfect and Reliable Instructor.

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ORNAMENTING.



DURING the last fifteen years the demand for ornamental work has increased at such a rapid rate in this country that it is almost impossible to bring any article into market and into public favor unless it be ornamented in some pleasing manner.

As any demand will always find a source of supply, so it has been in this case. All classes of mechanics combine to make whatever they produce pleasing to the eye.

Who has not admired an American railway train when cars and engine are newly painted and ornamented? Who does not look with preference at an omnibus when finely ornamented, and placed along side of one which is only painted in plain colors?

We hardly need refer to the difference which exists between the iron safes of fifteen years ago and those of modern times. From the plain green and black painting, safes have changed to rich, tasty colors, fine ornamental work and lettering; and frequently we find on them landscapes and portraits of a really fine execution. These changes have certainly not been the

mere fancies of the manufacturer, as they add considerably to the cost of production; but they have become a necessity caused by the development of taste in a more highly civilized community.

The principal nations of Europe, although they still take the lead in the finer arts, do not, as a general rule, apply decorations as profusely on articles of every day use, but confine themselves in this respect more exclusively to articles which are to represent artistic value.

It is often said that Americans ornament too much. We, on the contrary, assert that this is by no means the case. A taste for the higher arts is developed, and the result has been that styles of ornamentation have been created which bear a strictly American character.

Aside from this, it should be observed that the greater portion of the most highly civilized countries of Europe is situated within a latitude much farther north than the United States, and it is an established fact that the nearer we get to the equator, the demand for more brilliant ornamentation increases.

Not only will a tasteful and brilliant exterior always render certain goods more salable in this country, but in Spanish America, Brazil, New Zealand, Australia and other southern markets, goods unornamented would be unsalable—and we here take the opportunity to call the attention of parties, and especially those who manufacture for, or whose goods can be used in, the southern markets, to these facts.



LANDSCAPE PAINTING.



IN painting Landscapes, the painter is bound by certain rules of art to a correct imitation of the features of nature; but it is not required that he should descend to copy all her more minute features, or represent with absolute exactness the very shrubs, flowers and trees with which the spot is decorated. The painter must introduce no ornament inconsistent with the climate or country of his landscape; the figures which he introduces must have the costume and character of their age; and the piece must represent the general features of the scene which he has chosen for his subject; his general coloring, too, must be copied from nature, and the general tints must be those which prevail in a natural landscape.

We will first lay out a space the size of the picture to be painted, and paint it white.

OBTAINING THE OUTLINES.—Supposing the painter to be an AMATEUR, or not versed in the art of off-hand drawing, we will prepare an easy method by which he can obtain the outlines of the picture upon the surface which he wishes to paint. Prepare a sheet of white

paper by brushing over it equal parts of linseed oil, turpentine and balsam of fir, mixed together; this renders the paper transparent. Select a suitable picture, and over this lay the transparent paper, and with a lead pencil trace all the outlines of the picture; having done this, dust the back of the paper with any dry color, except black or white. The white space which we have previously painted, now being dry, we will lay the transparent paper upon its surface, and fasten it in place by inserting a tack in each corner of the paper, and with a pointed hard-wood stick carefully follow the outlines of the picture; remove the paper, and the outlines of the picture will be found upon the white surface. The picture now being ready to paint, we will decide upon the time of day and the season of the year that the scene is intended to represent.

AN EVENING SCENE.—An evening scene should be painted in subdued tints, and as the light decreases, so in proportion must the colors approach toward neutral tints.

A MID-DAY SCENE.—At mid-day, under a cloudless sky, natural objects should be painted in their full brightness of color, modified of course by the position of objects with respect to the sun, and their supposed distance from the eye of the observer.

AN EARLY MORNING SCENE.—An early morning scene should be composed of grays of different depths of tone, as they best represent the peculiar indistinctness and haziness that is seen at the beginning of day.

A CLEAR EVENING SKY.—A clear evening sky would require blue, violet, rose, flesh and yellow colors: the blue to be placed at the zenith, or at the top of the sky space, and the others to follow in the order named, the yellow to be placed the lowest, or next to the line of horizon.

Begin the picture by first laying out on the pallet board a set of tints for the sky and clouds. Commence to paint the picture at the top of the sky space, working downward—the colors to be the darkest at the zenith and lightest toward the horizon; blend the edges of the tints together and let them dry.

OBJECTS IN THE DISTANCE.—Next paint the objects farthest in the distance. These should be painted in sky tints, but darker in tone, as in looking toward the sky we see blue; so distant hills, mountains, etc., will appear of that color because of their remoteness.

OBJECTS IN THE MIDDLE DISTANCE.—Objects in the middle distance should have a little stronger coloring—the colors, though, should be rendered pale by the admixture of white.

AIR TINT.—Ultramarine blue gives an air tint and an appearance of distance.

OBJECTS IN THE FOREGROUND.—Objects that are in the foreground, or nearest portion of the picture, should be painted in strong, rich colors.

TREES IN THE FOREGROUND.—The foliage of trees in the foreground should first be painted with olive greens—black, yellow and red forming the proper color;

paint in the mass of foliage THINLY with this color, afterwards painting into this with tints richer in color, and high-lighting with bright or yellowish green.

DISTANT TREES.—Distant trees may be painted with a blueish green tint, composed of white, blue, and yellow ochre. The trunks of trees are sketched in with colored grays, composed of white, black and red, and worked partly over with washes of burnt sienna, and darker touches of vandyke brown or asphaltum, according to their positions in light or shadow.

WATER.—Water being largely dependent on reflections for its color, the sky and reflections from mountains, hills, trees, and objects casting their shadows upon the surface of the water, will furnish the proper color.

THE GROUND.—For the ground, coat with broad masses of a bright tint of white and raw sienna, and afterwards break it up with brown, composed of burnt umber and white, or burnt sienna; umber tints of various kinds being the most useful.

Burnt sienna and white give sunny tints, which should be opposed by cold shades of blue or gray.

White with yellow and reds, produce light and warmth in a picture, while browns and blacks are more retiring and are used to give shadow effects.



HARMONY.



THE painter should bear in mind that in order to produce a pleasing job of ornamental work, the scenes and surrounding scroll-work should harmonize with each other—that is, if a picture is intended to represent a warm scene, the scrolls should be composed of, or shaded with, colors having warmth; or if a cold scene, the scrolls may be produced in cool tints, or shaded and high-lighted with blues, grays, etc. Figures, objects and effects should be introduced into the scroll that represent either warmth or coolness, according to the picture.

Though the work may be poorly executed, if there has been a system of harmony carried throughout the entire ornamenting, it will have a pleasing look, and the eye of an ordinary observer will not detect an imperfection.



PORTRAIT PAINTING.



UNLIKE landscape painting, a portrait must be accurately produced—the outlines of the face, the expression of the countenance, and the color of the complexion, hair and eyes must be faithfully carried out.

Amateurs or new beginners should select a well painted portrait—"a chromo or lithographic portrait that has good colors will do"—and with a sharp-pointed pencil, faithfully draw all the outlines of the portrait upon a sheet of transparent paper placed over the picture, carefully sketching in the eyes. The surface that you wish to paint, having been previously coated white, and dry, you will obtain the outlines upon the white surface by proceeding the same as in landscape painting.

Flesh Color.—First mix a flesh tint, composed of white, Naples yellow and vermillion, and with this, coat all the parts requiring flesh color, leaving the orbit of the eyes unpainted.

Half Tints.—Next mix half tints, by adding blue or black to the flesh tint; these are to be used for the lightest shades, blending them in well with the flesh

color. For the darkest shades, use raw umber and light red.

Shadowing.—In shadowing, let the shadow fall on the same side of the body, leaving the other to the light—thus in a portrait, if you begin to shadow the right cheek, shadow also the right part of the neck, arm, side, &c. The shadows of the neck in a child or young woman are very fine, rare, and hard to be seen. In a man, the sinews and veins are expressed by shading the rest of the neck and leaving them light; the brawn of the arm should be full shaded on one side; the shoulder must be shadowed underneath. The breasts of a man are shown by two or three strokes underneath; in a woman, by a deep obicular shade.

The Lips.—For the lips, use carmine and white; the upper should be a shade darker than the lower one.

The Cheeks.—The cheeks should be vermilion, blended with the flesh color.

The Hair.—The hair may now be painted in; for a light brown, use white, yellow ochre and vandyke brown; for a dark brown or chestnut, use red, black and yellow. The hair may be shaded with vandyke brown or a red brown.

The Eye.—We will now direct our attention to the eye. This being the most difficult part of portrait painting, it should be carefully studied, for upon the eye the whole expression of the face is largely dependent. The white of the eye, to present a natural appearance, should be composed of flake white, to which should be

added a trace of Prussian blue and a slight tinge of raw umber; for the shadow, add more umber, painting in the darkest shade underneath the upper eyelid, and at the same time giving it a natural, rounded appearance. The color of the eye is next painted in. For a blue eye, use white and Prussian blue; for the shadow, there should be added to the color, a larger proportion of blue. For a gray eye, the color should be composed of a blue-gray, by adding to white and black a small portion of blue, and shading with the same color, to which either more blue or black has been added. For a brown eye, use burnt umber and orange chrome, or vandyke brown and black, shadowing with black. For the pupil or center of the eye, use clear black. The eyebrows and winkers may now be painted in, using the same color as for the hair.

Casting of Draperies or Clothing.—The drapery or clothing is now painted, and the folds should be distributed in such a manner as to appear rather the result of mere chance than of art, study or labor. Finish the picture by painting in the back-ground to suit the taste, but should be composed of some dark color, harmonizing with the picture.

LITTLE THINGS.


There are a thousand and one little things connected with ornamental painting that are seldom, if ever, thought of by the majority of painters; while, if a person takes time to examine closely, he will find that it is

these little things that go to make up a first-class job. The painter who overlooks them will turn out work with an ordinary finish, that will not bear inspection, and wonders why it is that his work is inferior to others.


INDIAN RED.

This pigment is one of the most useful as well as the most desirable of those used by the painter. It is a pure per-oxide of iron, and possesses a body or covering power almost astonishing. It is excellent for use with the pencil, and mixed with other pigments it gives rich and permanent colors. For striping, this color is used very extensively, and a broad line of indian red glazed with carmine, then edged with fine lines of green, makes a very handsome stripe on black gears.





Theatrical Scenery and Pictorial Signs.



THIS work being intended to be viewed at a distance, should be painted in *broad* masses of color, with heavy lights and shades. Objects should be brought out boldly, and very little care being taken to blend the edges of the colors together. While painting this class of work, the painter should frequently step out at the right distance from the scene, to see that his work is progressing properly, and that it can be observed at the proper distance.

Preparation of the Canvas.—Select a firm, heavy piece of muslin or canvas and stretch this out against a wall or anything having a smooth surface. In order to prevent the colors from striking through the canvas, it should be sized with strong glue or starch water; this should be applied with a large bristle brush, care being taken to cover the entire surface.

Mixing of Colors.—Theatrical scenery and pictorial signs, to look well, should be painted with colors having little or no gloss. Take a quantity of dry pigment and mix it to a stiff paste with brown japan; put

it into the mill, dilute with a very little rubbing varnish and grind; then thin with turpentine to a working consistency, add one tablespoonful of raw linseed oil to each pint of mixed paint. This will produce a mixture that will dry well, and have a little less than an egg-shell gloss.

In painting a pictorial sign, a good effect may be produced by painting a landscape with a large sky space, and lettering upon the sky space; the letters should be back and under-shaded. Another good effect may be made by painting a marine view, or waterscene and producing the lettering upon the water space. If the sun is represented as being in the rear of the letters, they may be shaded and have a shadow cast—the shadow must be cast forward upon the surface of the water. We have given these two illustrations as examples of a thousand and one ways that fine effects may be produced by forethought and study.

In compounding shades, tints and colors for this style of work, the same rules should be observed as in landscape and portrait painting.

ULTRAMARINE BLUE.

Ultramarine blue is the purest of all colors. When this pigment is used as a glazing over blue ground, it should be mixed with hard-drying body varnish and thinned with a very little turpentine when about to be applied. Ultramarine requires a good ground-work when used pure, and this should be as near the desired

shade of finish as can be obtained by other blues. Being a very transparent color, the ground should be solid. The finest quality of ultramarine blue is worth the small sum of \$90.00 a pound.

CARMINE.

Carminc is a peculiar color to mix and apply, to make a perfect job. Glazing over a prepared ground is the usual method, and various shades of the color may be made by a slight change in the ground. Carmine can be darkened without sullyiug its purity, by the addition of ultramarine blue. Carmine and ultramarine, mixed in equal parts, as a color, form a beautiful purple.


CHROME YELLOW FOR GROUNDS.

Few painters would believe that when two good coats of ultramarine blue are laid over a bright chrome yellow ground, that the blue will appear purer or richer in tone than if laid over a lead, or light blue. Vermilion laid over a chrome yellow ground, covers solidly: and it is said that it will hold its brightness and purity of color longer than when laid over a ground composed of indian red.



THE ART OF SCROLLING.



 **G**OLD LEAF SCROLLS.—In painting gold scrolls, the following process, as practiced by the leading ornamental painters throughout the country, will be found correct. We will now suppose that your panel which you wish to ornament is grounded in and thoroughly dry. The first step to be taken is to prepare a wash to prevent the gold leaf from adhering to the surface beyond the outlines of the sizing. Take the white of an egg and reduce it with water, and with a piece of sponge apply it to the panel, being careful to go over every part; or a thin wash of starch water can be used, applied with a flat camel-hair brush. While this is drying, you should prepare your scroll pattern. Select a heavy piece of paper in size corresponding with your panel; on this trace the outlines of your scroll which you wish to paint, and with a medium size needle proceed to puncture small holes about one-sixteenth of an inch apart, carefully following the lines. Now place your pattern against the panel to be ornamented, hold-

ing it in place by inserting small tacks in each corner, and with a pounce bag, made of a thin piece of muslin in which is tied up some dry whiting, strike over all the punctured holes. Remove the pattern carefully, and you will find the design on the surface of the panel in fine, white dots; dust this very lightly with a soft duster, to remove any surplus whiting—as an excess of whiting tends to clog the pencil and prevents it from cutting a clean, smooth line.

Gilding Size.—There are several different methods of preparing the sizing to receive the gold, and perhaps the following, for all practical purposes, is the best: Take good wearing body varnish and an equal quantity of good coach japan, and mix with it a little chrome yellow. This will be found to be very durable, and is preferred by most painters to fat oil size, as it has the advantage of drying more quickly.

Tools.—We will now turn our attention to the tools required. First to come into consideration is the palette board and rest-stick. The palette board is used to mix and distribute the colors upon, and while in use, is held upon the thumb of the left hand. The rest-stick should be made of hard wood, about $2\frac{1}{2}$ feet long, tapering at one end, with a small ball of cotton encased in a piece of chamois leather, fastened on the smaller end; this is to prevent the end of the stick from scratching the work. The larger end of the stick is held in the left hand in connection with the palette board, while the smaller end with the ball rests against the work; upon

this you can now rest your right arm, which enables you to procure a long, steady sweep with the pencil. The painter should learn to use these tools to advantage, as they are indispensable in doing good work.

Pencil Brushes.—The pencil brushes used for this kind of work are what is termed “black sable hair scrolling pencils.” They are sold in assorted sizes, from 1 to 13, and should be in length from $\frac{3}{4}$ to $1\frac{1}{2}$ inches. The hair should come to a fine sharp point. You will also need a round badger-hair blender or softener; this is used to blend the shades and colors together.

With the tools at hand, we are now ready to size the design. Take a small size pencil, and with the gilding size, carefully follow the outlines of the scroll, filling in between the lines as you proceed, with a shorter and thicker pencil, being careful to lay the size smooth and level.

Laying Gold Leaf.—The scroll having been sized in, the leaf should be laid so as to show no laps. Nearly every painter has a different process of laying leaf, and each one thinks his method the best. The following method will be found to be one of the best as well as most economical ways of producing a good job of gilding: Take a sheet of white tissue paper, and rub it over on one side with a piece of white wax, which can be procured at any drug store. The paper should be placed on something perfectly flat, and rubbed briskly with the wax over the surface, which will give the paper a “tackiness” sufficient to cause the gold leaf to ad-

here to it. The paper is now cut into squares a little larger than the leaves of the book of gold; this having been done, the book of gold leaf should be carefully opened, and the waxed side of the tissue paper lightly pressed upon the gold; the gold will now be found attached to the waxed paper. Each leaf of gold should be taken out in the same manner until the book is emptied. The gold leaf is now ready for use—but be sure and not begin to lay the leaf until the sizing is dry enough so that you can press the leaf down firmly without wrinkling it. The sizing should be *almost* dry, *i. e.*, has a very “tacky” feeling. If through delay or miscalculation, it should become too dry, breathe gently on it just before you apply each strip, and it will adhere perfectly. The gold now being all laid, we will rub it down smoothly with a wad of cotton, and with sponge and water wash off all excess of the leaf.

Shading.—This is the pleasentest but the most difficult part to perform, and the painter will find that his artistic taste will be drawn upon to its fullest extent. But commence your work with boldness and confidence, and with the determination that you will accomplish what you desire. By following the directions given in this work, you cannot fail of obtaining the desired results. Before attempting the shading, the gold should be toned, by receiving a thin wash of raw sienna diluted with varnish and turpentine; this should not be neglected by the painter, as when the shading is applied directly on the gold it has a dauby look, caused by the

leaf quickly absorbing the wash, and making corrections impossible. Where time will permit, the panels should have a coat of rubbing varnish before the shading is commenced. Asphaltum, diluted with varnish, is generally used for shading gold leaf; although burnt and raw sienna can be used to good effect. For a warm shade, tinge the asphaltum with carmine, cooler tones are produced by a tinge of verdigris. First commence by applying the lightest washes of shade. These should be blended, or softened, by taking your blender and beginning at a point that you wish the lightest, or where the shade is intended to fade out to a faint shadow, and lightly stroke it towards the darker part of the shade; this should also be carried out with each succeeding shade. When the first shade has become dry, the parts intended to be darker should receive another coat of the wash, and so on until the scroll is brought out in bold relief.

Glazing.—Our next step, if we wish to produce a brilliant job, will be to glaze parts of the scroll; the colors generally used for this are carmine and verdigris, to which should be added a small quantity of varnish. Carry the glaze over the clear gold, and the shades. This produces a beautiful effect, and gives the appearance of light and dark shadows of the same color.

High-lighting.—High-light with straw color. In high-lighting the edge of a scroll it should be done directly on the leaf and not on the ground-work.

Remarks.—In shading scrolls, either gold or color,

the painter should avoid giving them that *flat* appearance that some scrolls have, especially those done by inexperienced workmen. Parts that are intended to be retired, or in the back-ground, should be shaded darker, while those to be prominent should be brought forward by lighter shading and high-lighting, and the whole scroll relieved from the surface of the panel by back and under shading. The scroll, after being completed, should have the appearance of having been cut from gold, or solid color and laid upon the surface of the panel.

Back and Under Shading.—All scrolls, excepting those on black grounds, should have a back and under shadow cast upon the ground. A glazed shadow is first run on, afterwards going over it with a black shade about half the width, keeping the black shadow against the scroll. On red grounds, carmine diluted with varnish may be used for the shadow; blue grounds should have a shadow of ultramarine.

COLOR SCROLLS.

In producing the outline of a scroll in colors upon the surface of a panel, the same rules should be observed as in gold scrolling. When a scroll is painted in several different colors, the darkest color should be retired, or placed in the back-ground, while the lightest is brought in prominence to the front, and the medium colors are placed into position according to their depth

of tone. In making a selection of the colors only those should be used that are in harmony with each other; browns, olive, greens and amber-toned drabs make a very pleasing scroll. A scroll may be painted in one color alone by using different tints and shades of the same color; that is, the scroll, when completed, will appear as if composed of graduated tones of blue, green, &c. For example, take a blue scroll, for the lighter parts add white; for the shade or darker part add more blue, or shade with ultramarine, and high-light with very light blue.

The Proper Grounds for Scrolls.—Green, as a ground color, sets off well with gold, purple, pink, lemon, flesh, pearl, light greens and yellows. On a red ground, use lemon, pearl gold, pale blues and greens. Blue grounds should be ornamented with gold, pink, salmon, buff, light blues, yellows, or drabs. For a black ground, drabs, pink, lemon, gold, light blues, greens, purple and salmon. If a scroll is painted drab or green, it may be shaded with asphaltum, and high-lighted with the colors of the scroll made lighter by the addition of white or yellow. If a red scroll, shade with carmine, and high-light with orange.

DESIGNING, ENLARGING AND REDUCING OF SCROLL PATTERNS, LANDSCAPES, &c.

Scroll Designing.—The best method for new beginners, and those not skilled in designing, will be, to

select a good scroll design, and study it carefully. We will first decide whether it is proportioned to fill the proposed space to be ornamented. Next, is it necessary to have it so complicated? If it is too small, or too large, it must be enlarged or reduced. Should we decide that it is too compact, we would omit some inferior branches of the scroll. If too long, it may be divided at different points. Scrolls may be divided, and one part added to another. Thus, from one or more scroll designs, a large number of patterns can be obtained. All scrolls should have a base, or pace of beginning, and should be compact and well balanced. The lines should be gradually diminished and become less compact, as they recede from the base, or beginning point.

Enlarging and Reducing of Scrolls, Landscapes, &c.
—Should a scroll or landscape prove to be too small, and we were not sufficiently skillful to enlarge it by the eye, we would square the pattern, or picture, by drawing an even number of squares upon its surface. Now draw the size of the panel, or space to be ornamented, on paper; next lay off the space thus obtained into squares corresponding in number to those on the original design, and guided by the lines, redraw it. To reduce a design, *reverse* the operation, as given in the foregoing rule. Enlarging and reducing by squares is an exercise of the very first importance to the painter, as it trains the eye to notice the true direction of lines; and in time very correct copies may be made without recourse to squaring the design.



THE ART OF STRIPING.



STRIPING requires precision, a light hand and a correct eye. While one may be a good painter, his striping may spoil the job. One thing to be careful of in striping a job is, after deciding upon a certain style, keep that style throughout the entire carriage.

Handling of the Striping Pencil.—The striping pencil is held between the thumb and forefinger of the right hand, the second, third and fourth fingers acting as guides and supports. In drawing a stripe the hand should move steadily and rapidly, and the pressure with the guide fingers should be light. The eye, which plays an important part in striping, should always *precede* the stripe, but never follow it, thus avoiding irregularity. Care should be taken in drawing a stripe, especially a heavy line, not to press too hard on the point of the pencil when it is first put down, and when it is about to be raised. The proper rest for the guide fingers should not be over half or three-quarters of an

inch distant from the line of the stripe. A straight-edge will be found very useful where mouldings and edges of bodies are too far distant to be used as rests for the guide fingers.

Mixing of Striping Color.—In the opinion of most painters, prepared tube colors are by far the best, and also the cheapest colors that can be used in striping, as they are ground much finer, and work smoother than those mixed and ground by hand. To these should be added a drop or two of wearing body varnish. This has the effect of holding the pencil down more closely to the surface on which you are striping, thereby avoiding *skipping*. Use turpentine for thinner. This is kept in a cup by itself, into which the pencil is dipped at intervals, as the color requires thinning. Tube sugar of lead is usually added to the color for dryer; but if Japan is used it should by no means be added directly to the color, but should be mixed with the turpentine that is used for thinning.

Glazed Stripes.—The colors generally used for glazed striping are carmine and French ultramarine blue. These colors being transparent require a ground color to be first striped on, afterward going over it with the glazing. The ground for carmine should be Tuscan red, a deep rich brown or orange chrome; while for the blue ground mix a medium toned blue of flake white and Prussian blue. Mix the glazing with the varnish, and with a camel-hair striping pencil go over the ground color with the glaze.

Striping Pencils, Selection, &c.—In selecting stripers see that the points of the hair are sharp, and that the end of the pencil makes a square cut off if pressed down flat. The hair should be smooth, straight and elastic. To draw the pencil through the lips and wetting it is a sure sign that you do not know much about selecting for you spoil the pencil while you are buying it. Water will surely kink the hair, and it is a very difficult matter to straighten it again. For striping, camel, sable and ox-hair pencils are mostly used nowadays. Red sable, although highly prized on account of its superior quality, is so seldom found of sufficient length that none can be found in the market at the present day. Camel hair, being the least elastic, can only be used to advantage in colors that are not too heavy, otherwise it will bend downward and become difficult to handle; still some painters use these brushes exclusively, and manage to get along well with them. Sable hair stripers, having more spring to them, are certainly to be preferred to any other, as they will work well in any color; but their high price, especially for a first-class article, prevents many from using them. Ox hair stripers are very straight and elastic, but too stiff to make curved lines. On straight lines, on cars and wagons, they may be used to advantage. The flat or sword pencils, for striping, without doubt, are the best working stripers yet introduced. It enables the workman to accomplish twice the amount of work usually done with the round pencil, and more perfectly. Its

peculiar shape makes it a self-feeder, and five or six spokes can be striped at one filling, while the round pencil will do one only. This is of great advantage when running a great length, as the stripe is continuous and perfect, and much joining avoided. It can be used with quick drying colors with greater freedom than the round pencil can in slow drying, and five to six different width stripes can be made with one pencil. The practice of cutting off the ends of broad stripes in order to secure a square end to the stripes is not to be commended, for when once the natural ends of the hair are cut the pencil point becomes awkward when the pencil is filled with color.

HOW TO STRIPE A COACH, CARRIAGE OR WAGON GEAR: 105 DIFFERENT STYLES.

A Black Gear.—A black gear may be stripped in the following different styles: Stripe with fine double lines of chrome green; or a $\frac{1}{8}$ inch line of blue, glazed with ultramarine; or a $\frac{1}{4}$ inch line of brown, edged with carmine; or a $\frac{5}{8}$ inch line of olive green and distant fine lines of light green; or with two $\frac{1}{8}$ inch lines of dark blue; or two fine lines of red, glazed with carmine; or striped with a broad line of lake, edged with gold and split through the center with a fine line of carmine; or with a broad line of green, edged with gold; or with double $\frac{1}{16}$ inch lines of dark brown; or $\frac{1}{4}$ inch line of Chinese vermillion, with a fine line of same color $\frac{1}{4}$ inch

distant, glazed with carmine; or two fine lines of vermillion; or distant fine lines of green, with center fine line of white; or with broad line of dark green, edged with fine lines of light green, and split through the center with fine line of gold; or striped with $\frac{1}{4}$ inch line of malori green, with fine line of same color distant $\frac{1}{4}$ inch, glazed with verdigris; or with two $\frac{1}{8}$ inch lines of dark blue, glazed with ultramarine; or striped with a broad line of blue, edged with gold, and split through the center with fine line of orange; or with $\frac{1}{4}$ inch line of dark blue and fine line of light blue, distant $\frac{1}{4}$ inch; or $\frac{1}{8}$ inch line of brown and distant lines of carmine; or $\frac{1}{4}$ inch line of green and distant fine lines of green; or striped with two fine lines of Tuscan red, glazed with carmine.

A *Purple Lake Gear* may be striped with a medium line of black, edged with a fine line of gold; or a $\frac{1}{2}$ inch line of Indian red, glazed with carmine; or striped with two $\frac{1}{8}$ inch lines of brown, glazed with carmine.

Light Yellow and Straw Color Gears should be striped with two $\frac{1}{8}$ inch lines of black; or a $\frac{3}{8}$ inch line of blue gray and distant fine lines of black; or a $\frac{1}{8}$ inch line of blue and distant fine lines of same color; or $\frac{3}{4}$ inch broad line of black, split with $\frac{1}{8}$ inch line of pale blue; or striped with a broad line of black with distant fine line of black; or with broad line of carmine and distant fine line of black.

A *Cardinal Red Gear* may be striped with a $\frac{1}{2}$ inch line of black, edged with a fine line of gold; or a $\frac{1}{4}$ inch line of black with distant fine lines of black; or two $\frac{1}{8}$ inch lines of black.

A Dark Brown Gear.—Stripe with two $\frac{1}{4}$ inch stripes of light brown; or a $\frac{1}{2}$ inch stripe of black, edged with a fine line of light brown, and split through the center with a fine line of gold or carmine; or a $\frac{1}{4}$ inch line of black with distant fine lines of orange; or two fine lines of dark red.

A Light Carmine Gear may be striped with two $\frac{1}{8}$ inch lines of black; or a $\frac{1}{2}$ inch line of black with distant fine lines of same color; or a broad line of black, edged with gold and split through the center with a fine line of green.

A Dark Green Gear should be striped with a $\frac{1}{2}$ inch line of black and distant fine lines of red; or distant fine lines of vermilion, glazed with carmine; or a $\frac{1}{4}$ inch line of black split with an $\frac{1}{8}$ inch line of light green; or two fine lines of yellow lake; or distant fine lines of willow green; or a broad line of black with distant fine lines of light green; or a broad line of black, edged with an $\frac{1}{8}$ inch line of carmine and split with a fine line of carmine; or a $\frac{3}{4}$ inch line of black, edged with a $\frac{1}{4}$ inch line of white and centered with an $\frac{1}{8}$ inch line of olive green; or a broad line of black, edged with fine line of gold and split with fine line of blue; or distant fine lines of black and center line of yellow lake; or an $\frac{1}{8}$ inch line of black with distant fine lines of same color; or two $\frac{1}{8}$ inch lines of light green; or two 1-8 inch lines of black; or striped with two fine lines of vermilion, glazed with carmine,

A Plum Color Gear should be striped with two 1-8

inch lines of Indian red, glazed with carmine; or a $\frac{1}{4}$ inch line of medium toned blue, with two hair lines of canary color, distant $\frac{1}{8}$ inch; or a broad line of black, edged with gold.

A *Yellow Lake Gear* may be striped with two 1-8 inch lines of black; or with a broad line of scarlet lake centered, with a fine line of quaker green; or with a broad line of black and distant fine lines of the same color; or with a $\frac{1}{2}$ inch line of black, edged with a fine line of scarlet lake and split with a fine line of dark green.

An *Olive Green Gear* should be striped with two fine lines of vermilion, glazed with carmine; or a 1-4 inch line of milori green, edged with black; or a $\frac{1}{2}$ inch line of black, edged with gold, and a fine line of pea green in center of black stripe.

A *Dark Carmine Gear* is striped with two 1-8 inch lines of black and fine line of light carmine in center; or a 1-4 inch line of black and distant fine lines of black; or a broad line of black, edged with dark green and a fine line of gold in center of black stripe.

A *Dark Blue Gear*.—Stripe with two fine lines of light blue and glaze with ultramarine; or a broad line of black, edged with fine line of white and centered with 1-8 inch line of white; or a broad line of black, edged with fine line of gold and fine line of orange in center of black stripe.

A *Vermilion Gear*.—Stripe with a 1-4 inch line of black with distant fine lines of same color; or with two

1-8 inch lines of black; or a 1-4 inch line of black and distant fine lines of white or yellow.

A Lake Gear may be striped with a broad line of black split with a fine line of gold; or a 1-4 inch line of dark brown with distant fine lines of light brown, glazed with carmine; or two 1-8 inch lines of dark orange; or a broad line of black with distant fine lines of light carmine; or with two 1-8 inch lines of vermilion; or two 3-16 inch lines of maroon; or two fine lines of carmine; or a broad line of black, edged with fine line of gold and split with fine line of pea green.

A Naples Yellow Gear.—Stripe with two fine lines of brown; or a 1-4 inch line of blue with distant fine lines of same color; or two 1-8 inch lines of blue or carmine.

A Light Blue Gear may be striped with two fine lines of gold; or two 1-8 inch lines of scarlet vermilion; or a broad line of black, edged with a fine line of buff.

A Canary Color Gear.—Stripe a broad line of black with distant lines of red; or two 1-8 inch lines of carmine or blue.

A Scarlet Lake Gear.—Stripe with broad line of carmine lake, centered with fine line of ultramarine blue; or two 1-8 inch lines of black; or a broad line of black, edged with a fine line of gold.

A Tan Color Gear should be striped with a 1-4 inch line of canary color and distant fine lines of black; or two 1-8 inch lines of black.

A London Smoke Gear.—Stripe with a broad line of black, edged with an $\frac{1}{8}$ inch line of light shade of London smoke, and on the black stripe two fine lines of yellow ochre; or a $\frac{1}{4}$ inch line of black, edged with a fine line of gold; or two $\frac{1}{8}$ inch lines of black.

A Bottle Green Gear may be striped with two 3-16 inch lines of black; or a $\frac{1}{2}$ inch line of black, edged with gold; or two $\frac{1}{8}$ inch lines of milori green.

An Orange Gear.—Stripe with $\frac{1}{2}$ inch line of black and distant fine lines of black; or two $\frac{1}{8}$ inch lines of black.

An Umber Gear.—Stripe with an $\frac{1}{8}$ inch line of black, and fine line with buff; or a $\frac{1}{2}$ inch line of black, edged with gold or orange.

A Chocolate Gear may be striped with a broad line of orange and distant fine lines of lemon; or two $\frac{1}{8}$ inch lines of black; or two 3-16 inch lines of maroon.

Gold may be used with good effect upon any of the above colors "*excepting yellows*" in connection with the striping, but should be used sparingly. A stripe or two around the hubs, and a few touches, or a light scroll or fancy stripe upon the clips will be all that good taste requires.

CARE OF TOOLS.

All hair tools used in ornamenting, such as striping pencils, brushes, &c., after using, should be washed out clean in turpentine and then greased from heel to point

with fresh mutton tallow. Stripers should be laid out straight on a piece of window glass and pressed down flat, while pencils should be laid in a box or drawer kept for that purpose.

YELLOWS.

Yellow is a delicate color, easily defiled, when pure, by other colors. The sensible effects of yellow are gay, enlivening and full of luster. It is the first of the primary or simple colors, nearest in relation to, and partaking most of, the nature of white, mixed with which it affords the faint hues called straw-color, &c. The principal yellows used in the paint shop are, chrome yellow, yellow ochre, patent yellow and Naples yellow.





THE ART OF SIGN WRITING.



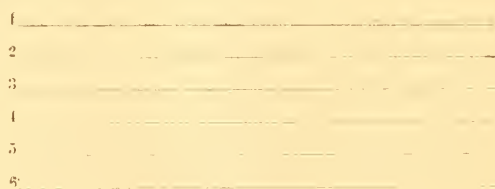
SIGN-WRITING is a mere mechanical art, and may be acquired by any one possessing exactness and precision.

Formation of Letters.—The painter's first object must be to acquire a thorough knowledge of the forms of letters, such as manuscript or text-hand, Roman capitals, italics, Egyptian, block, &c., &c. He should carefully observe the proportion of all letters. The upper parts of B, E, K and S, it will be seen, are a little smaller than the lower parts of these letters. The difference in size between the upper and lower part of the S is shown by observing this letter when turned bottom side up. As will be seen, those letters having a fine line, the period and other punctuation marks are round. In the block and square letters, the period and kindred marks are square. To become a good sign-writer the painter must first practice the manuscript or text hand, by so doing he will acquire the

habit of making a free and graceful stroke or sweep with the pencil. Many painters begin with the plain Egyptian block, for the reason that it is the easiest. They will never make good sign-writers, as they acquire a stiffness in the use of the pencil and formation of letters, which they very rarely, if ever, get rid of.

Tools For Sign-Writing.—The tools used by the sign-writer are comparatively few. A rest-stick, a small palette board and palette knife, a few good sable and camel hair pencils of assorted sizes, a rule and pair of compasses, and a guilder's tip and cushion for laying gold leaf, are about all that he will require.

Laying-out or Arrangement of Letters on a Sign-Board.—In laying out a line of letters the six line principle is, without doubt, the best rule that can be practiced by the painter. Divide the board equally into six horizontal lines (see cut).



SIX LINE PRINCIPLE.

As will be readily seen, in laying out a plain block letter, the space between figures 1 and 2 and 5 and 6 will form the arms, head and lower parts of B, C, D, E, F, G, J, L, O, P, Q, R, S, T, U, Z, &c. The space between figures 3 and 4 form the center bars of B, E, F, H, P, R, S, the crossing of the arms of X,

and the connecting point of the two arms of Y. The space between 4 and 5 will form the lower or cross bar of A. This rule is applicable to all styles of letters used by the sign-writer. The painter should introduce into a sign a section of a circle or a curved line, as it is pleasing to the eye, and relieves the stiffness of the straight lines. Each line of letters should begin and end at an equal distance from the side of the board. The space between each letter in the same line should be equal. If you can possibly avoid it never begin or end a line of letters with such words as "and, to, for, with," &c., but let them come in between the lines of larger letters. Make the most important words, such as the name, business, &c., the largest, most distinct, and easily read of any on the board. The above is a very important part of sign-writing, for however good the shape of the letters may be, if they are not properly arranged the effect will be bad. Take a piece of chalk and slightly sketch your letters with it, and with a fine pencil endeavor to form the letters in out-line with as few strokes as possible, filling up between the lines with a shorter and thicker pencil. By following this principle you will acquire ease, rapidity and correctness of out-line.

The Rapid Transit Method.—A new method of laying out a sign-board, and one that is being very extensively used at present, is as follows: Cut out from heavy paper or straw-board a correct pattern of a letter. Lay this upon the surface to be lettered, and with a

pencil mark around the pattern, thus forming the outline of the letter. To get the lines for shading move the pattern *down* and a little to the *right*, and with a pencil mark around the lower and right hand edges of the pattern. This is a very simple, quick and correct method of lettering, and enables the most ordinary painter to become an expert workman.

Punctuation of Sign-Writing.—The period (.) is used at the end of every sentence, even if it is but one word, as “Bakery.” “Jeweler.” “Henry Williams.” “J. Martin, Dealer in Wood, Coal, Lime and Sand.” The period is also used to denote the omission of letters at the last of a name or word, called abbreviation, as “W. J. Clark” for “William James Clark;” “Co.” for “Company.” The comma (,) is used, in sign-writing, to denote the omission of words. This is shown in the following sentences: “Jones and Mitchell and Co. are Dealers in Paints and Oils and Glass and soforth.” To avoid repeating the *and* we use the comma, thus: “Jones, Mitchell & Co., Dealers in Paints, Oils, Glass, &c.” The apostrophe (') is used to denote the omission of letters in the beginning or middle of a word, thus: “'t is,” for it is; “'t were,” for it were; “'81,” for 1881; “comp'y,” for company; “gen'l ag't,” for general agent; “d's,” for days; “m's,” for months, etc. The apostrophe is also used to denote the possessive case, thus: “Bacon's Block.” If the owner's name ends with an “s,” the apostrophe follows the s, as “Jones' Block,” “Burs' Shop.” If two or more persons are spoken of in the

possessive case, the apostrophe follows the "s," as "Ladies' Parlor;" "Gents' Smoking Room;" "Henry Brothers' Shop." If the person's name takes the character of the adjective, describing the article, then no apostrophe is required, as "Jones Block," "Planters Bark." This character (&) stands for *and*, and came originally from *Lt.*, *Etc.*, in script, the Latin abbreviation for *et cetera*, "and the rest." The first is used for connecting firm names, and the other at the end to avoid details, thus: "Jones & Wood, or Jones, Wood & Co., Dealers in Coal, Lime, Sand, &c.

Shading of Letters.—But very little information can be written on the subject of shading letters. The painter should have some knowledge of light and shade, and to acquire that knowledge, as regards letters, we would advise him to procure a few good letters cut from wood, about an inch thick. By laying these on a painted surface, where a strong side light will fall upon them, by careful study they will give him the true principle of shading a letter.

The Cast Shadow.—To best illustrate this the painter should understand the laws of projection of shadows from solid bodies. Every solid body projects a shadow in the same direction with its rays, that is, towards the part opposite to the light. Hence, as either the luminary or the body changes place, the shadow also changes. Every solid body projects as many shadows as there are luminaries to enlighten it. As the light of the luminary is more intense, the shadow

is deeper. Hence, the intensity of the shadow is measured by the degrees of light that space is deprived of.

FAT OIL SIZE.

Fat oil size should be used for work requiring great durability, such as signs, cars and outside work generally. Any painter can have a supply of fat oil by putting some pure linseed oil into shallow leaden vessels, so as to be about an inch deep. Let them stand in the sun for a few months until the oil becomes thick. The vessels should be covered with glass to keep them clean. Take yellow ochre, in fine powder, mix it with a quantity of the above oil, grind them well together, thin with turpentine and put into a clean pnt. To keep it from skimming over, put some of the clear fat oil on top. Be sure to keep it covered. This size will keep good for years. Size, when too thin, will curdle and run, and when too thick, will give heavy edges and diminish the edges of the gold. The pencil that is used for out-lining should not be so narrow as to lay a heavy edge that cannot be worked back, and to fill in, a short, thick pencil is the best to use. In applying size, if it should become set in the pencil, and the painter is obliged to wash it out in turpentine, he should be careful not to continue the work until the turpentine has been worked out from the pencil, as that would dilute the size and make it too thin at the point where he begins again.

GLASS GILDING.

Size, for gilding upon glass, is made by dissolving two or three shreds of refined gelatine in clear soft water. When dissolved, boil it a few minutes over a slow fire, and strain through a piece of linen or fine muslin. This should be applied warm. Have the glass perfectly clean, leaving no trace of finger marks or grease. Warm it by the fire, then flow the size on the space where the gold leaf is to be placed, and then lay the leaf on immediately, being careful to have it smooth, as its uniform brightness depends in a great measure upon this point. Allow the leaf to extend well over the parts to be lettered or scrolled. Use a flat camel-hair brush for flowing on the size. Rub the leaf down smooth and solid with a clean wad of cotton, then hold it (face side) toward a fire, to burnish. Draw out the design you require to put on the glass upon a piece of paper, and prick around the out-lines with a pin. Then lay the paper face side down against the gold, and with a pounce bag (filled with dry whiting) pounce off the parts where the holes are in the paper, which gives an out-line on the gold, forming a guide in which to back the gilding. For backing, use asphaltum diluted with turpentine. Lay on the asphaltum according to the design, and when thoroughly dry, wash off. The gold, where it is not covered by the backing, will readily leave the glass, leaving the edges sharp and clean. The letters or scroll can then be shaded, if required. In de-

signs, where you will have to etch, or shade the gold, you will proceed to lay on the gold and pounce the design exactly as above, then etch or shade it with the point of a slate-pencil, or piece of hard wood, slightly wetting the wood. When you wish a broad or black line, pick it in with black.

STANDARD PRICES OF ORNAMENTAL WORK.

It has been our aim and endeavor to give the painter all the valuable and reliable information that can be acquired on the subject of ornamental painting, and the following tariff of prices will be fully appreciated by our readers. We have been to the expense of procuring, from widely different points of the country, the established prices of leading painters. While the prices thus obtained were too high for some localities, in others they were too low, but we have carefully compared them, and selected from the number a medium or standard price to be charged in doing work of this kind :

Ornamenting Omnibus (painting extra).	-	\$20.00 to \$25.00
" Menagerie Wagon (painting extra).	- - - - -	25.00 to 35.00
Ornamenting Band Wagon (painting extra).	- - - - -	55.00 to 65.00
Ornamenting Peddler's Wagon, small size. (painting extra).	- - - - -	15.00 to 25.00
Ornamenting Peddler's Wagon, large size. (painting extra).	- - - - -	25.00 to 30.00
Ornamenting Lumber Wagon (painting extra).	-	3.50 to 5.00
" Spring Wagon, " " "	-	3.50 to 5.00

The above prices include striping of the gears.

Ornamental work, time work, per hour, - 0.50 to 0.75

STANDARD PRICES OF LETTERING.

Lettering in paint, plain letter, per foot,	-	-	-	30
“ “ gold, “ “ “ “ “ “ “ “	-	-	-	60
Add to the above, for single shade, per foot,	-	-	-	15
“ “ for double shade, “ “ “ “	-	-	-	20
“ “ glazed shade, per foot, “ “ “ “	-	-	-	25

In order to get the number of feet of lettering on a sign-board it should be measured *running* measure. That is, the full length or width of the sign-board should be measured. If there are two lines of letters on the board, they should be counted as double measure, and so on with each succeeding line.

55 RECEIPTS FOR MIXING FINE COLORS.

Tea Green.—Raw umber, Prussian blue and chrome yellow. This color should be mixed so as to preserve a bluish tone.

Odd Brown.—Burnt sienna and Prussian blue.

Dark Pure Green.—Chrome green, deep and Prussian blue.

Bottle Green.—Dutch pink and Prussian blue, for ground. Glaze with yellow lake.

Rose Color.—Five parts of flake white and two of carmine.

Oak Color.—Eight parts of white and one of yellow ochre.

Olive Color.—Eight parts of yellow, one blue and one black.

Snuff Color.—Four parts of yellow, and two of Van-dyke brown.

Canary Color.—White and lemon yellow, or patent yellow.

Pearl Color.—White, black and red.

Gold Color.—White and yellow, tinted with blue and red.

French Gray.—White, tinted with drop black.

Deep Buff.—Yellow ochre, lightened with white, and a small portion of red.

Light Buff.—Yellow ochre, lightened with white.

Lead Color.—Eight parts of white, one of blue and one of black.

Medium Gray.—Eight parts of white and two of black.

Jonquil Yellow.—Flake white and chrome yellow, to which add a very small proportion of vermilion or carmine.

French Red.—Indian red, lightened with vermilion, and glazed with carmine.

Bismarck Brown.—1 ounce of carmine, $\frac{1}{2}$ ounce crimson lake, and 1 ounce best gold bronze.

Clay Drab.—Raw sienna, raw umber and white lead, equal parts; then tint with a few drops of chrome green.

Olive Brown.—One part of lemon yellow and three parts of burnt umber.

Yellow Lake.—Umber and white, equal parts. Add a small quantity of Naples yellow and a drop of scarlet lake; glaze with yellow lake.

Chocolate Color.—Add a little lake or carmine to a can of burnt umber, or Indian red and black to form a brown, then add a very little yellow.

Plum Color.—Two parts white, one blue and one red.

Portland Stone.—Three parts raw umber, three yellow ochre, one white.

Brick Color.—Two parts yellow ochre, one red and one white.

Grass Green.—Three parts yellow and one Prussian blue.

Carnation Red.—Three parts lake, one white.

Bronze Green.—Five parts chrome green, one black and one umber.

Peach Blossom.—Eight parts white, one red, one blue and one yellow.

Willow Green.—Five parts white and two of verdigris.

Light Gray.—Nine parts white, one blue and one black.

Dove Color.—Red, white, blue and yellow.

Claret Color.—Red and black, or carmine and blue.

Cream Color.—Five parts white, two yellow and one red.

London Smoke.—Two parts umber, one white and one red.

Lilac.—Four parts of red, three white and one blue.

Purple.—The same as lilac, with two parts of blue.

Violet.—Similar, but more red than purple.

Drab Color.—Nine parts of white and one umber.

Citron.—Three parts of red, two yellow and one blue.

Stone Color.—Five parts of white, two yellow and one of burnt umber.

Pea Green.—Five parts of white, and one of chrome green.

Tan Color.—Five parts of burnt sienna, two yellow and one of raw umber.

Maroon Color.—Three parts of carmine and two of yellow.

Green.—Blue and yellow, or black and yellow.

Wine Color.—Two parts of ultramarine and three of carmine.

Chestnut Color.—Two parts of red, one black and two of chrome yellow.

Flesh Color.—Eight parts of white, three of red and three of chrome yellow.

Fawn Color.—Eight parts of white, one of red, two of yellow and one of umber.

Straw Color.—Five parts of yellow, two of white and one of red.

Lemon Color.—Five parts of lemon yellow and two of white.

Copper Color.—One part red, two of yellow and one of black.

Brown.—Three parts of red, two black and one yellow.

Salmon Color.—Five parts of white, one yellow, one umber, one red.

The painter should avoid using a greater number of pigments in mixing colors than are absolutely necessary to produce the color required.

THE ART OF FRESCO PAINTING.

THE ART of painting in fresco is naturally adapted to ornamental painting, and the attention of eminent artists is at present turned to the revival of this great mode of art. Fresco painting is performed with pigments prepared in water and applied upon the surface of *fresh laid plaster* of lime and sand, with which walls are covered. And as lime, in an active state, is the common cementing material of the ground, and colors employed in fresco painting, it is thus obvious that such colors only can be used as remain unchanged by the action of lime. The following table will show the colors that are little, or not at all, affected by lime, and may be used in fresco painting:

<i>Red—</i>	<ul style="list-style-type: none"> { Red Ochre, { Red Lead, { Light Red, { Vermilion, { Venetian Red, { Indian Red. { Madder Reds. 	<i>Orange—</i>	<ul style="list-style-type: none"> { Orange Ochre, { Orange Chrome, { Orange Lead, { Laque Mineral, { Jaune de Mars, { Burnt Sinena,
<i>Blue—</i>	<ul style="list-style-type: none"> { Ultramarine, { Smalt, and all { Cobalt Blues. 	<i>White—</i>	<ul style="list-style-type: none"> { Barytic White, { Pearl White, { Gypsum.

<i>Yellow—</i>	Yellow Ochre,	<i>Brown—</i>	Asphaltum,
	Oxford Ochre,		Mummy,
	Brown Ochre,		Bone Brown,
	Roman Ochre,		Ruben's Brown,
	Stone Ochre,		Vandyke Brown.
	Sienna Earth,		Bistre,
	Indian Yellow,		Burnt Umber,
<i>Green—</i>	Patent Yellow,	<i>Black—</i>	Raw Umber,
	Naples Yellow,		Cassel Earth,
	Massicot,		Antwerp Brown,
			Chestnut Brown,
			Ultramarine Ashes,
			Manganese Brown.
<i>Purple—</i>	Cobalt Green,	<i>Black—</i>	Indian Ink,
	Terre Verte,		Lamp Black,
	Verdigris,		Ivory Black,
	Green Verditer,		Frankfort Black,
	Chrome Green,		Graphite,
	Mineral Green,		Mineral Black,
	Emerald Green,		Black Chalk.
<i>Purple—</i>	Purple Ochre,	<i>Black—</i>	
	Gold Purple,		
	Madder Purple.		

Mixing of Fresco Colors.—Take water in which there has been dissolved a quantity of glue, and add lime that has been perfectly burnt, and kept long slacked in a wet state. This will form a white wash. The glue is employed to give adhesion and to hold the colors in place. Next, take dry colors or pigments and dissolve them in whisky and add to the white wash, when they are ready for use. Fresco paints ready prepared can now be bought of wholesale dealers. They are sold dry, and only require the addition of water.

Tools Used by the Fresco Painter.—The tools used by the fresco painter consist of bristle pencils, round and flat, and are sold in assorted sizes from 1 to 24; also ox hair riggers, numbering from 1 to 6, and ox hair stripers of all sizes. The painter should see that his pencils, after using, are well washed out with water,

as lime, which forms the base of all fresco colors, is very injurious to hair, and if left in the pencil would soon destroy it.

General Instructions.---To become an expert fresco artist, the painter should understand the general principles of scrolling and striping; and above all a thorough knowledge of light and shade. Also the general rules of perspective. In perspective, the point of sight must be in the center of the supposed picture. All lines parallel to an imaginary line drawn from the eye of the observer to the point of sight, must terminate or vanish at that point. The line of horizon must therefore rise or descend with the position of the eye, and consequently with the point of sight. The base, or ground line of the picture, and all others parallel with it must be parallel with the line of horizon. All objects appear to diminish in proportion to their distance from the eye of the observer. Thus, columns, trees, posts, etc., of equal height, will appear to diminish as they recede from the eye. Lights are those parts of a subject which are illuminated, or which lie open to the luminary by which the subject is supposed to be enlightened, and in this sense lights are opposed to shadows. There are various kinds of lights: general lights, as the air; particular lights, as the sun, a lamp, a candle, or a fire. Different lights have different effects, and in painting a picture, occasion a different management of almost every part. Two lights of equal strength must never be in one and the same picture, but a larger and

a lesser, the larger to strike forcibly on the middle, extending its greater clearness on those parts of the design where the principle figures of it are, diminishing it gradually as it approaches nearer and nearer to the border. Shadow is a plan where the light is weakened by the interposition of some solid body before the luminary. If the solid body, that projects the shadow, be perpendicular to the horizon, and the place it is projected on be horizontal, the shadow is called a right shadow, such are the shadows of men, posts, trees, buildings, mountains, etc. If the solid body be placed parallel to the horizon, the shadow is called a versed shadow, as the arms of a man outstretched, etc.

NOTE.—For the laws on projection of shadows see article on cast shadows in sign-writing.

ITEMS FOR THE PAINTER.

Painting.—Painting is both a preservative and a beautifier.

Mercury produces vermilion, Venetian red, Mars orange, and yellow and Indian red are the products of iron.

In order to prevent scratching the panel when making guide lines to stripe by the painter should use a pair of compasses made from wood.

Metal cups may be used for common colors, but for vermilion, carmine, fine greens, lakes, &c., earthen cups are the best, as they can readily be cleaned.

A good reader will generally make a good workman. That is, it depends very much on just what is read and the amount of interest there is taken in the reading of matter touching on one's own business. This is especially adapted to the ornamental painter.

False economy in the paint shop is where the painter attempts to do good work with poor tools and cheap stock. The painter who runs a shop on the *cheap* plan turns out work that is of but little credit, and generally has his trouble for his pains. Poor tools and material never yet went hand in hand with good work.

Gold leaf is superior to colors in producing a finely finished scroll. Colors and their hues, or even neutral tints well assorted, produce showy ornaments; but gold finely shaded, has a richness that is peculiarly its own.

Drawing Paper.—Whatman's papers are considered the best. They are distinguished by the names—"Demy," "Super Royal," "Imperial," "Double Elephant," "Antiquar."

The painter should not rely too much on the judgment of others, but should be original and have some ideas of his own, in case he was left to try his hand some time unexpectedly.

Red is complementary to green, and *vice versa*; orange to blue; greenish yellow to violet, and indigo to orange yellow.

Carmine, the richest of the red colors, was discovered by a Franciscan Monk, at Pisa, while he was preparing a medicine from cochineal and salt of Tartar.

The best grounds for gold to show off well are dark blue, vermillion and lake.

Tints.—The tones of a color produced by the addition of white, added to the normal color.

Shades.—The tones of a color produced by the addition of black to the normal color.

Tones.—The series of graduations of a pure color from its greatest intensity, weakened by the addition of white, or deepened by the addition of black.

USEFUL RECEIPTS FOR THE PAINTER.

To Clean Pictures.—Put into two quarts of strong lye, a quarter of a pound of castile soap scraped fine, with a pint of spirits of wine; let them simmer on a fire for half an hour, then strain through a cloth; apply it with a brush to the picture, wipe it off with a sponge, and apply a second time, which will remove the dirt; then with a little linseed oil warmed, rub the picture, and let it dry. This will make it look as well as new.

Saving Ornaments.—Sometimes in re-painting old work, the painter wishes to preserve the ornament. To do this he should give it a coat of some kind of size, such as glue, isinglass, ball licorice and water, or the white of an egg. The painting then proceeds, paying no regard to the ornament until the first coat of varnish is ready to rub. In rubbing, the varnish should be cut through over the ornament until it is exposed.

Oil Paint—To Reduce with Water.—Take gum

shellac 1 lb, sal soda $\frac{1}{2}$ lb, water 3 pints; put all into a kettle and boil, stirring until all is dissolved; this, when cool, can be bottled for use. Mix up two quarts of oil paint as usual—except no turpentine is to be used—any color desired. Now put one pint of the gum shellac mixture with the oil paint when it becomes thick, and may be reduced with water to a working consistency.

Another Method.—Take soft water, 1 gal., and dissolve in it 3 ounces of pearl ash; bring it to a boil, and slowly add shellac, 1 lb. When cold, it is ready to add to oil paint, in equal portions.

Blackboard Paint.—One pint of shellac dissolved in alcohol, $1\frac{1}{2}$ ounces ground pumice stone, 1 ounce fine rotten stone, 2 ounces lampblack; mix the last three ingredients together, wet a portion at a time with a little of the shellac and alcohol, and grind as fine as possible with a pallet knife, after which pour in the remainder of the alcohol, stirring often to prevent settling. One pint will furnish two coats for forty square feet of blackboard not previously painted. No oil should be used.

Fire-proof Paint.—Slack stone-lime by putting it into a tub, which should be covered, to keep in the steam. When slacked, pass the powder through a fine sieve, and to each six quarts of it add 1 quart of rock salt, and water 1 gal.; then boil and skim clean. To 5 gallons of this, add 1 lb pulverized alum, $\frac{1}{2}$ lb pulverized copperas, and slowly add powdered potash, $\frac{3}{4}$ lb;

then hard-wood ashes, 4 lbs. Any desired color can be added to this. It makes wood incombustible, renders brick impervious to water, and is as durable as slate.

Water-proof Oil-Rubber Paint.—Dissolve 5 lbs. of India rubber in 1 gallon of boiled linseed oil, by boiling. If this is too thick, reduce with boiled oil; if too thin, use more rubber. This is valuable for painting cloth.

Frosting Glass.—Sugar of lead ground in oil, applied with a brush, then pounced while wet, with a wad of cotton.



HONORABLE MENTION.

Too much cannot be said in praise of the valuable goods manufactured by John W. Masury & Son, of New York City. Their coach painters' colors are favorably known throughout the whole country, and are to-day the recognized standard colors of the world. Of the varnishes manufactured by them, we will say that for *brilliancy, easy working properties and durability* they are surpassed by none.

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In mentioning these goods we speak from experience, having used them successfully for many years, and as yet have the first cause for complaint.

Their advertisement will be found in another part of this book, and we would urge all painters who wish to procure first-class material to send to them for catalogues, descriptive circulars and price lists.

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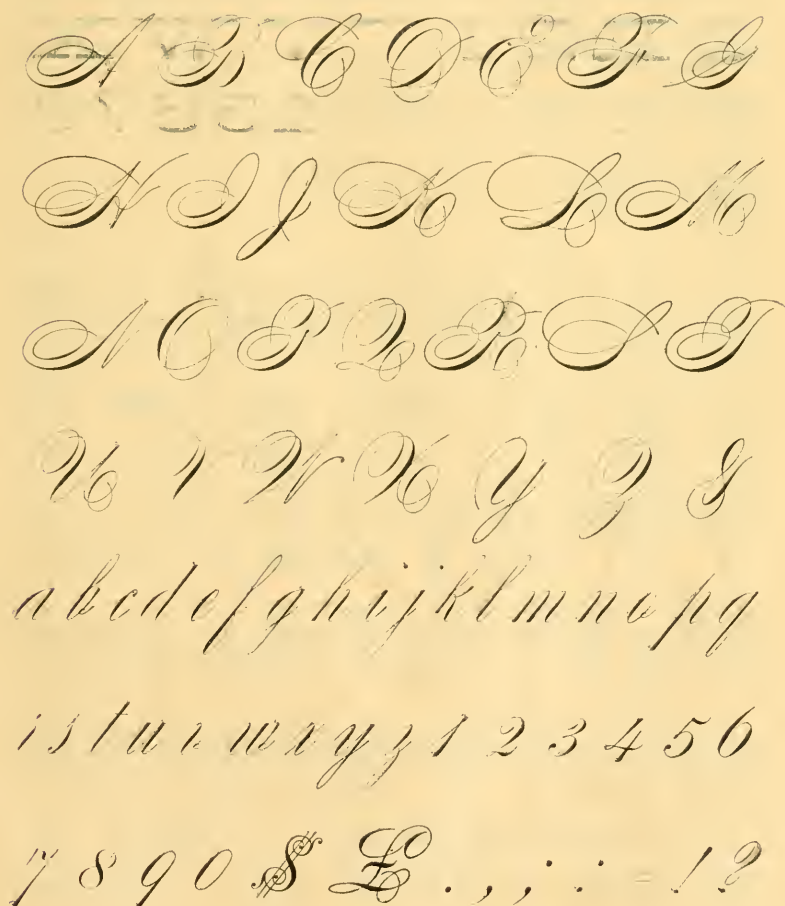
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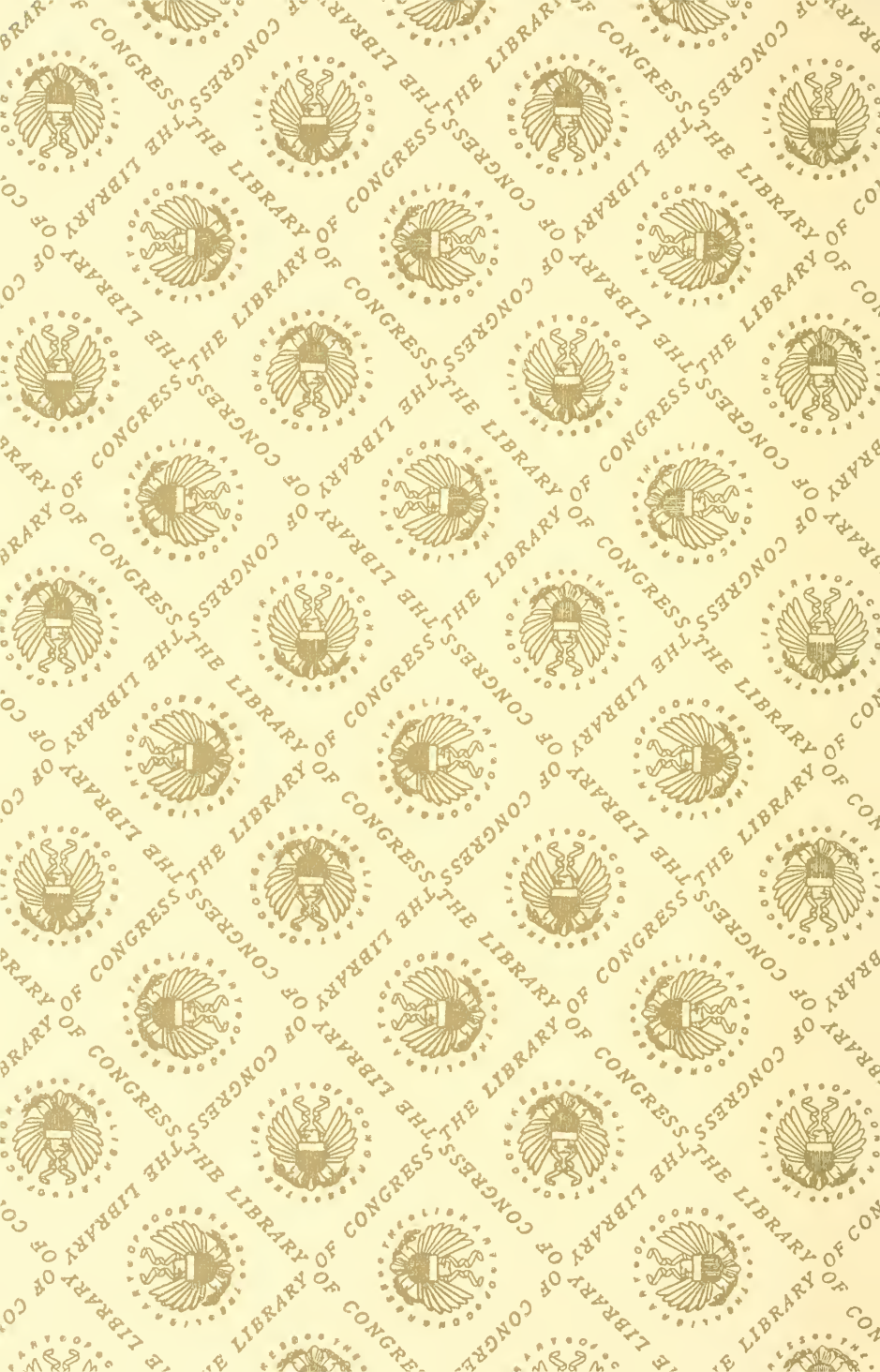
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